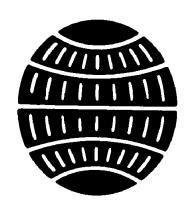
# CHAPTER 29



# ELECTRICIAN'S MATE (EM)

NAVPERS 18068-29E CH-42

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#### NAVY ENLISTED OCCUPATIONAL STANDARDS

**FOR** 

ELECTRICIAN'S MATE (EM)



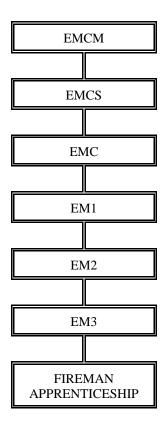
#### SCOPE OF RATING

<u>Electrician's Mates (EM)</u> stand watch on generators, switchboards, control equipment, and electrical equipment; operate and perform organizational and intermediate maintenance on power and lighting circuits, electrical fixtures, motors, generators, voltage and frequency regulators, controllers, distribution switchboards and other electrical equipment; test for short circuits and grounds; and rebuild electrical equipment, including solid state circuitry elements.

These Occupational Standards are to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 29.

### **GENERAL INFORMATION**

#### **CAREER PATTERN**



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

#### **SAFETY**

The observance of proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

# **Job Title Electrical Systems Maintainer**

Job Code 003699

<u>Job Family</u> <u>NOC</u> <u>Short Title (30 Characters)</u> <u>Short Title (10 Characters)</u>

Installation, Maintenance, and Repair 4900-2094.00 ELECTRICAL SYSTEMS MAINTAINER ESYS MAINT

<u>Pay Plan</u> <u>Career Field</u> <u>Proficiency Level</u> <u>Other Relationships and Rules:</u>

Enlisted EM A Not applicable, based upon the NEC assigned to the job (if any).

#### Job Description

Electrical Systems Maintainers are responsible for the installation, operation, adjustment, routine maintenance, inspection, testing and repair of a ship's electrical power generation systems, lighting systems, electrical equipment, electrical appliances, and interpreting the electrical sketches, diagrams, and blueprints associated with those systems. They maintain operating efficiency of distribution panels, switches, switchboards, controllers, voltage regulators, current transformers, voltage transformers, and electric motors. They inspect, maintain, test, and repair electrical power equipment and related electronic equipment, install and maintain storage batteries, install power and lighting circuits, connect electric power machinery and electric power equipment, repair distribution circuits, and run wiring for lights and other equipment. They perform maintenance and repair of electrical equipment and appliances, shipboard elevator systems, and various propulsion and auxiliary control consoles, test for short circuits and grounds, and rebuild electrical equipment. These maintainers work under the supervision of a mentor while learning a trade or skill.

DoD Relationship O\*NET Relationship

Title and Group:Code and Area:Title and SOC Code:Name and Family Code:Electric Power166200Electrical and Electronics Repairers,<br/>Commercial and Industrial EquipmentInstallation, Maintenance, and<br/>Repair1661649-2094.0049

#### **AUXILIARY ELECTRICAL EQUIPMENT**

<u>Paygrade</u>	Task Type	Task Statements	Skills	<u>Abilities</u>
E4	CORE	Maintain air compressor el	lectrical components Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain air conditioning	system electrical components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E5	CORE	Maintain alarm system cor	· ·	Tinger Desiertly
E3	CORE	Waintain alaim system coi	Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain battery support s	ystems	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain boiler electrical of	components Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
F4	CORE	M-:		Tinger Dexietily
E/4	CORE	Maintain cathodic protecti	Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain chilled water sys	tem components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Collection, Hold	ing, and Transfer (CHT) system electrical	components
			Operation and Control	Manual Dexterity
77.4	2077		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain degaussing system	m components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
F4	CORE	Maintain dehydrator electr	•	
<del>-</del> ·			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity

E4	CORE	Maintain electrically-operated valve components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain galley equipment electrical components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain laundry equipment electrical components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain mess deck equipment electrical components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain precipitator components	
		Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Programmable Logic Controllers (PLC)  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain refrigeration system electrical components	9
		Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain salinity indicating system components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain scullery equipment electrical components	
		Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain sensing and control electrical devices  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E5	CORE	Maintain shaft speed sensing, indication, and Engine Order Telegr Operation and Control	•
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain ships heating system electrical components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain steering control system electrical components	I inger Benerity
E.	CORE	Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E5	CORE	Maintain ultrasonic cleaner components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain ventilation system electrical components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Maintain welding equipment electrical components  Operation and Control	Manual Dexterity
		Systems Evaluation	Finger Dexterity
E4	CORE	Repair ships heating system electrical components	9
		Management of Material Resources	Multi-limb Coordination
		Repairing	Manual Dexterity
E4	CORE	Test storage batteries	-
		Operation Monitoring	Extent Flexibility
		Quality Control Analysis	Multi-limb Coordination
E4	CORE	Troubleshoot ships heating system electrical components  Systems Evaluation	Multi-limb Coordination
		Troubleshooting	Inductive Reasoning
		v	Ü

## **ELECTRICAL INSTALLATIONS**

<u>Paygrade</u> E5	<u>Task Type</u> CORE	<u>Task Statements</u> Interpret working drawing	<u>Skills</u>	<u>Abilities</u>
E3	CORE	interpret working drawing	Complex Problem Solving	Written Expression
			Critical Thinking	Written Comprehension
		ELEVATO	ORS AND CONVEYORS	
<u>Paygrade</u> E4	<u>Task Type</u> CORE	<u>Task Statements</u> Maintain conveyor electri		<u>Abilities</u>
			Operation and Control	Manual Dexterity
E4	CORE	34:4:1 4 11	Systems Evaluation	Finger Dexterity
E4	CORE	Maintain elevator and dur	nbwaiter electrical components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Repair conveyor electrica	l components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair elevator and dumb	waiter electrical components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
		LIFT	ING EQUIPMENT	
<b>Paygrade</b>	Task Type	Task Statements	Skills	Abilities
E4	CORE	Maintain capstan electrica		Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain crane electrical	•	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4				ringer Dexiertly
	CORE	Maintain electrical hoist e	•	Manual Dexterity
E4	CORE		electrical components Operation and Control Systems Evaluation	
E4		Maintain electrical hoist e  Maintain electrical winch	electrical components Operation and Control Systems Evaluation	Manual Dexterity
	CORE	Maintain electrical winch	clectrical components Operation and Control Systems Evaluation components Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity
E4			clectrical components Operation and Control Systems Evaluation components Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity  Manual Dexterity
	CORE	Maintain electrical winch	electrical components Operation and Control Systems Evaluation components Operation and Control Systems Evaluation cal components	Manual Dexterity Finger Dexterity  Manual Dexterity Finger Dexterity
	CORE	Maintain electrical winch  Maintain windlass electric	electrical components Operation and Control Systems Evaluation components Operation and Control Systems Evaluation cal components Operation and Control	Manual Dexterity Finger Dexterity  Manual Dexterity Finger Dexterity  Manual Dexterity
	CORE	Maintain electrical winch  Maintain windlass electric	electrical components Operation and Control Systems Evaluation components Operation and Control Systems Evaluation cal components Operation and Control Systems Evaluation	Manual Dexterity Finger Dexterity  Manual Dexterity Finger Dexterity  Manual Dexterity

<b>Paygrade</b>	Task Type	Task Statements	<u>Skills</u>	<b>Abilities</b>
E4	CORE	Maintain flight deck lighti	ing system components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain general lighting	system components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain navigation and s	ignal lighting system components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity

### MOTORS AND GENERATORS

<u>Paygrade</u> E4	<u>Task Type</u> CORE	Task Statements  Maintain Alternating Curr	Skills rent (AC) motor electrical components	<u>Abilities</u>
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Direct Current (I	DC) generator components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Direct Current (I		
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Motor Generator	r (MG) sets	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Ships Service Go	enerator (SSG) electrical components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain static converter of	components	,
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E5	CORE	Maintain static inverter co	omponents	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
		DOI!	ID DIGEDINISTICAL	

# POWER DISTRIBUTION

<u>Paygrade</u>	Task Type	Task Statements	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Clean casualty power syst		M 1D : '
			Equipment Maintenance	Manual Dexterity
			Equipment Selection	Problem Sensitivity
E4	CORE	Inspect casualty power sys		
			Operation Monitoring	Problem Sensitivity
			Quality Control Analysis	Memorization
E4	CORE	Maintain Arc Fault Detect	for (AFD) system components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain Automatic Bus T	Transfer (ABT) components Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
F4	CORE	Maintain circuit breakers	,	0
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain electrical connec	etions	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain electrical distrib	ution switchboard components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain electrical power	monitoring systems	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain grounding straps	3	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain magnetic contro		
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity

F4	CORE	Maintain Manual Bus T	ransfer (MBT) components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain shore power ca	able components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Maintain storage batteri		
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Operate electrical distrib	bution switchboard components  Operation and Control	Manual Dexterity
			Operation Monitoring	Finger Dexterity
F4	CORE	Operate power distribut	1	I inger Dexierry
L4	CORE	Operate power distribut	Operation and Control	Manual Dexterity
			Operation Monitoring	Finger Dexterity
E4	CORE	Perform shore power ca	ble operations	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
		:	SMALL CRAFT	
Paygrade	Task Type	Task Statements	Skills	Abilities
E4	CORE	Maintain small craft ele	ctrical system components	
			Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Repair small craft electr		
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Troubleshoot small craf	t electrical system components  Systems Evaluation	Multi-limb Coordination

E4	CORE	Troubleshoot small craft electrica	nl system components ms Evaluation	Multi-limb Coordination
	•	bleshooting	Inductive Reasoning	
		TECHNICAL AI	DMINISTRATION	
E6	CORE	Maintain administrative programs	S	
		Learr	ning Strategies	Deductive Reasoning
		Moni	toring	Written Comprehension
E6	CORE	Review administrative programs		
		Moni	toring	Inductive Reasoning
		Read	ing Comprehension	Deductive Reasoning
E6	CORE	Update administrative programs		
		Moni	toring	Written Comprehension
		Writi	ng	Deductive Reasoning

# Job Title Electrical Systems Technician

Job Code 003302

<u>Job Family</u> <u>NOC</u> <u>Short Title (30 Characters)</u> <u>Short Title (10 Characters)</u>

Installation, Maintenance, and Repair 4900-2094.00 ELECTRICAL SYSTEMS TECHNICIAN E SYS TEC

Enlisted EM J/M Not applicable, based upon the NEC assigned to the job (if any).

#### Job Description

Electrical Systems Technicians are responsible for the installation, operation, adjustment, routine maintenance, inspection, testing and repair of a ship's electrical power generation systems, lighting systems, electrical equipment, electrical appliances, and interpreting the electrical sketches, diagrams, and blueprints associated with those systems. They maintain operating efficiency of distribution panels, switches, switchboards, controllers, voltage regulators, current transformers, voltage transformers, and electric motors. They inspect, maintain, test, and repair electrical power equipment and related electronic equipment, install and maintain storage batteries, install power and lighting circuits, connect electric power machinery and electric power equipment, repair distribution circuits, and run wiring for lights and other equipment. They perform maintenance and repair of electrical equipment and appliances, shipboard elevator systems, and various propulsion and auxiliary control consoles, test for short circuits and grounds, and rebuild electrical equipment. These technicians are expected to perform work independently and mentor Electrical Systems Maintainers with limited supervision.

DoD Relationship O\*NET Relationship

Title and Group:	Code and Area:	Title and SOC Code:	Name and Family Code:
Electric Power	166200	Electrical and Electronics Repairers,	Installation, Maintenance, and
		Commercial and Industrial Equipment	Repair
166	16	49-2094 00	49

#### **AUXILIARY ELECTRICAL EQUIPMENT**

<u>Paygrade</u>	Task Type	Task Statements	<u>Skills</u>	<u>Abilities</u>
E5	CORE	Maintain fire protection sy	stem electrical components  Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E5	CORE	Maintain generator govern	nor system electrical components	
		6 6	Operation and Control	Manual Dexterity
			Systems Evaluation	Finger Dexterity
E5	CORE	Repair battery support sys		
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair boiler electrical con	1	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair Collection, Holding	g, and Transfer (CHT) system electrical co Management of Material Resources	omponents  Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair degaussing system	components	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair dehydrator electric	•	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair electrically-operate		
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair fire protection syste	em electrical components  Management of Material Resources	Multi-limb Coordination
			C U	
F.5	CORE	n :	Repairing	Manual Dexterity
E5	CORE	Kepair generator governor	system electrical components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
			Repuiring	тании Беліеніу

E5	CORE	Repair precipitator compo	nents Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair salinity indicating s	system components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair sensing and control		
			Management of Material Resources	Multi-limb Coordination
E.f.	CORE	D : 1 6 1 :	Repairing	Manual Dexterity
E5	CORE	Repair snart speed sensing	g, indication, and Engine Order Telegraph (I Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair ships steering conti	rol system electrical components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair ultrasonic cleaner of	components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair welding equipment		
			Management of Material Resources	Multi-limb Coordination
7.5	CODE		Repairing	Manual Dexterity
E5	CORE	Troubleshoot battery supp	ort systems Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot boiler electri	ical components	
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E4	CORE	Troubleshoot Collection, I	Holding, and Transfer (CHT) system electric Systems Evaluation	cal components  Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot degaussing s	system components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot dehydrator e	electrical components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot electrically-o	operated valve components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot fire protection	on system electrical components	manetive Reasoning
		<b>F</b>	Systems Evaluation	Multi-limb Coordination
T7.5	CORE	Troublashoot concretor co	Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot generator go	overnor system electrical components  Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot precipitator	components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot salinity indic	ŭ	maneure reasoning
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot sensing and		Multi limb C I'm at
			Systems Evaluation Troubleshooting	Multi-limb Coordination
E5	CORE	Troubleshoot shaft speed s	Troubleshooting sensing, indication, and Engine Order Teleg	Inductive Reasoning
10	CORE	Tradicinost mait specti s	Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning

E5	CORE	1 0	ntrol system electrical components stems Evaluation	Multi-limb Coordination
		Tra	oubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot ultrasonic cleaner	r components	
		Sys	stems Evaluation	Multi-limb Coordination
		Tro	oubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot welding equipme	ent electrical components	
		Sys	stems Evaluation	Multi-limb Coordination
		Tro	oubleshooting	Inductive Reasoning
		ELECTDICAL	INSTALLATIONS	

#### **ELECTRICAL INSTALLATIONS**

<b>Paygrade</b>	Task Type	Task Statements	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Install permanent cables		
			Installation	Manual Dexterity
			Repairing	Finger Dexterity
E5	CORE	Interpret working drawing	S	
			Complex Problem Solving	Written Expression
			Critical Thinking	Written Comprehension
E4	CORE	Repair damaged electrical	equipment	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair deranged electrical	equipment	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity

# **ELEVATORS AND CONVEYORS**

<u>Paygrade</u> E4	<u>Task Type</u> CORE	Task Statements Repair conveyor electrical	1	<u>Abilities</u>
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair elevator and dumby	waiter electrical components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Troubleshoot conveyor ele	ctrical components	
			Systems Evaluation	Multi-limb Coordination
E4	CORE	Troubleshoot elevator and	Troubleshooting dumbwaiter electrical components	Inductive Reasoning
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning

# LIFTING EQUIPMENT

<u>Paygrade</u> E4	<u>Task Type</u> CORE	Task Statements Repair capstan electrical of	Skills components	<u>Abilities</u>
			Management of Material Resources	Multi-limb Coordination
E5	CORE	Repair crane electrical co	Repairing mponents	Manual Dexterity
		•	Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair electrical hoist ele		
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair electrical winch co	omponents	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair windlass electrical	components	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity

E4	CORE	Troubleshoot capstan ele	ctrical components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot crane electronic	rical components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot electrical h	oist electrical components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E4	CORE	Troubleshoot electrical w	vinch components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot windlass el	ectrical components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning

# LIGHTING SYSTEMS

<b>Paygrade</b>	Task Type	Task Statements	<u>Skills</u>	<u>Abilities</u>
E4	CORE	Repair flight deck lighting		
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair general lighting sys	stem components	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Repair navigation and sign	nal lighting system components	
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Troubleshoot flight deck li	ighting system components	
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E4	CORE	Troubleshoot general light	ing system components	
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E4	CORE	Troubleshoot navigation a	nd signal lighting system components	
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning

## MOTORS AND GENERATORS

Paygrade	Task Type	Task Statements	<u>Skills</u>	Abilities
E5	CORE	Repair Direct Current (DC		
			Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair Motor Generator (	MG) sets	
		•	Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair Ships Service Gen	erator (SSG) electrical components	
		•	Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair static converter con	mponents	
		•	Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair static inverter com	ponents	
		•	Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Troubleshoot Direct Curre	ent (DC) generator components	
			Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning

E5	CORE	Troubleshoot Motor Gene	rator (MG) sets Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot Ships Service	te Generator (SSG) electrical components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot static conver	rter components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot static inverte	er components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
		POWE	R DISTRIBUTION	
Paygrade	Task Type	Task Statements	Skills	Abilities
E5	CORE		(AFD) system components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair electrical distributi	on switchboard components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Repair power distribution	1 0	Multi-limb Coordination
			Repairing	Manual Dexterity
E5	CORE	Test casualty power system	n components	
			Operation Monitoring	Extent Flexibility
			Quality Control Analysis	Multi-limb Coordination
E5	CORE	Test electrical distribution	switchboard components Operation Monitoring	Extent Flexibility
			Quality Control Analysis	Multi-limb Coordination
E5	CORE	Troubleshoot Arc Fault De	etector (AFD) system components  Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot electrical dis	stribution switchboard components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
E5	CORE	Troubleshoot power distri	bution system components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
		SI	MALL CRAFT	
Paygrade	Task Type	Task Statements	Skills	Abilities
E4	CORE	Maintain small craft electr		Manual Dexterity
			Systems Evaluation	Finger Dexterity
E4	CORE	Repair small craft electricate	al system components  Management of Material Resources	Multi-limb Coordination
			Repairing	Manual Dexterity
E4	CORE	Troubleshoot small craft e	lectrical system components Systems Evaluation	Multi-limb Coordination
			Troubleshooting	Inductive Reasoning
		TECHNICA	AL ADMINISTRATION	-
Davana 3-	Tools T	Took States	CI::II.	A bilition
<u>Paygrade</u> E6	<u>Task Type</u> CORE	Task Statements Approve Quality Assurance	Skills ce (QA) repair forms	<u>Abilities</u>
		11 ()	Equipment Selection	Written Comprehension
			Management of Material Resources	Deductive Reasoning

E6	CORE	Maintain administrative p	programs	
			Learning Strategies	Deductive Reasoning
			Monitoring	Written Comprehension
E5	CORE	Prepare Quality Assurance	e (QA) repair forms	
			Equipment Selection	Written Comprehension
			Management of Material Resources	Written Expression
E6	CORE	Review administrative pr	ograms	
			Monitoring	Inductive Reasoning
			Reading Comprehension	Deductive Reasoning
E5	CORE	Review Quality Assurance	e (QA) repair forms	
			Monitoring	Inductive Reasoning
			Reading Comprehension	Deductive Reasoning
E6	CORE	Update administrative pro	•	
			Monitoring	Written Comprehension
			Writing	Deductive Reasoning
E5	CORE	Update Quality Assuranc	e (QA) repair forms	
			Monitoring	Written Comprehension
			Writing	Deductive Reasoning